UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,986	03/30/2001	Carl M. Ellison	42390P8096	8962

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EXAMINER
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ART UNIT	PAPER NUMBER
2137	

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/822,986	ELLISON ET AL.
	Examiner	Art Unit	
	Michael Pyzocha	2137	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 January 2005*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 17-21* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 17-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01212005*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-15 and 17-21 are pending.

2.   Amendment filed 01/21/2005 has been received and

considered.

Information Disclosure Statement

3.   The noted missing documents have been considered on

03/04/2005.

Claim Rejections - 35 USC § 112

4.   The rejections of claims 11-12 by 35 USC 112 have been

withdrawn based on the amendments.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which

forms the basis for all obviousness rejections set forth in this

Office action:

> (a) A patent may not be obtained though the invention is not identically
> disclosed or described as set forth in section 102 of this title, if the
> differences between the subject matter sought to be patented and the prior
> art are such that the subject matter as a whole would have been obvious at
> the time the invention was made to a person having ordinary skill in the
> art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

6.   Claims 13-15, and 18-21 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Waldin et al (U.S. 6,094,731) and

further in view of Menezes et al ("Handbook of Applied
Cryptography").

As per claims 13 and 19, the modified Waldin et al and
Menezes et al system discloses a method and program comprising:
determining whether a digital signature chain accompanies a file
to be accessed (see Waldin et al column 7 lines 22-28 where it
is inherent that if the recipient and originating computer are
the same it must determine if the file has a digital signature
chain); entering into isolated execution mode if the file does
not have a corresponding digital signature chain; analyzing an
integrity of the file; and issuing the digital signature chain
if the file has an acceptable file integrity (see Waldin et al
column 6 lines 18-65) and verifying the digital signature chain
of the file by determining whether the file has an acceptable
file integrity, and whether each signatory providing the digital
signature chain is authorized (see column 6 lines 18-65).

Waldin et al fails to disclose the digital signature chain
(Waldin et al discloses a hash chain).

However, Menezes et al teaches a digital signature from a
hash (see page 452-454).

At the time of the invention it would have been obvious to
a person of ordinary skill in the art to use Menezes et al's

method of digital signature creation for the hash chain of
Waldin et al's system.

Motivation to do so would have been to allow for
authentication, authorization and non-repudiation of information
(see Menezes et al page 22).

As per claims 14 and 20, the modified Waldin et al and
Menezes et al system discloses precluding access to the file if
the file has unacceptable file integrity (see Waldin et al
column 6 lines 18-65).

As per claims 15 and 21, the modified Waldin et al and
Menezes et al system discloses precluding access to the file if
at least one signatory of the digital signature chain is
unauthorized (see Waldin et al column 6 lines 18-65).

As per claim 18, the modified Waldin et al and Menezes et
al system discloses opening the file if the verified digital
signature chain indicates acceptable file integrity (see Waldin
et al column 6 lines 18-65); and refusing to open the if the
verified digital signature chain indicates unacceptable file
integrity (see Waldin et al column 4 lines 45-62).

7.   Claims 1-5, 9-12 are rejected under 35 U.S.C. 103(a) as
being unpatentable over the modified Waldin et al and Menezes et
al system and further in view of Garney (US 5386552).

As per claim 1, the modified Waldin et al and Menezes et al disclose a platform comprising: a processor (see figure 1 #9); and a memory coupled to the processor, the memory including an isolated memory area containing a file checker executable by the processor, the file checker including a file analyzer to perform a scan operation on a file to produce a scanning result and a signature generator to produce a signature chain including a digital signature having the scanning result (see column 4 lines 45-62).

The modified Waldin et al and Menezes et al system fails to disclose being a portion of the memory accessible by the processor only when the processor is operating in an isolated execution mode.

However, Garney teaches the use of isolated memory (see column 2 lines 64-68 and column 3 lines 46-52).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Garney's isolated memory to store file checker and signature generator of the modified Waldin et al and Menezes et al system.

Motivation to do so would have been all the system to handle interrupts from different devices (see Garney column 3 lines 35-45).

As per claim 2, the modified Waldin et al, Menezes et al
and Garney system disclose the scan operation by the file
checker is a virus detection function (see Waldin et al column 4
lines 48-49).

As per claim 3, the modified Waldin et al, Menezes et al
and Garney system disclose the incoming file is prevented from
being executed if the verified digital signature chain indicated
an unacceptable file integrity (see Waldin et al column 6 lines
18-65).

As per claim 4, the modified Waldin et al, Menezes et al
and Garney system disclose the incoming file is accessed if the
verified digital signature chain indicates acceptable file
integrity (see Waldin et al column 6 lines 18-65).

As per claim 5, the modified Waldin et al, Menezes et al
and Garney system disclose a first control unit coupled to both
the processor and the memory (see Waldin et al column 4 lines
45-62).

As per claim 9, the modified Waldin et al, Menezes et al
and Garney system disclose the file analyzer is a virus
detector, an intrusion detector, or a file integrity checker
(see column 4 lines 48-49).

As per claim 10, the modified Waldin et al, Menezes et al
and Garney system discloses the signature generator comprises an

encryptor to encrypt the scanning result using a signature key

(see Menezes et al pages 452-454); and a time stamper coupled to

the encryptor to timestamp the encrypted result using a time

indicator, the time stamped encrypted result corresponds to the

digital signature (see Waldin et al column 4 line 63 through

column 5 line 50).

As per claim 11, the modified Waldin et al, Menezes et al

and Garney system discloses the time indicator is one of a

calendar time and a version identifier of the scanner (see

Waldin et al column 4 lines 63-67).

As per claim 12, the modified Waldin et al, Menezes et al

and Garney system discloses the file is code (see Waldin et al

column 3 lines 5-20).

8.   Claims 6-8 are rejected under 35 U.S.C. 103(a) as being

unpatentable over the modified Waldin et al, Menezes et al and

Garney system as applied to claim 5 above, and further in view

of Swaney et al (U.S. 4,488,232).

As per claim 6, the modified Waldin et al, Menezes et al

and Garney system fails to disclose a second control unit

coupled to the first control unit and a token bus interface.

However Swaney et al teaches a token bus interface (see

column 8 lines 9-27 where it is inherent the system with a token

bus interface must have a second control unit coupled with the

first control unit to allow for the output of the file via the

token bus interface).

At the time of the invention it would have been obvious to

a person of ordinary skill in the art to use Swaney et al's

token bus interface within the modified system of Waldin et al

and Menezes et al.

Motivation to do so would have been to allow for the

systems to use a token bus to transfer the data (see Swaney et

al column 1 lines 10-14).

As per claim 7, the modified Waldin et al, Menezes et al,

and Swaney et al system discloses non-volatile memory coupled to

the second control unit (see Swaney et al column 5 lines 1-13).

As per claim 8, the modified Waldin et al, Menezes et al,

and Swaney et al system discloses input/output devices coupled

to the second control unit (see column 8 lines 9-27).

9.   Claim 17 is rejected under 35 U.S.C. 103(a) as being

unpatentable over the modified Waldin et al and Menezes et al

system as applied to claim 13 above, and further in view of

Hewlett-Packard Co. (EP 1030237).

As per claim 17, the modified Waldin et al and Menezes et

al system fails to disclose issuing the digital signature chain

with an indication that the file integrity is unacceptable if

the integrity of the file is analyzed and determined to be
unacceptable.

However, Hewlett-Packard Co. discloses such an indication
(see column 6 lines 33-36).

At the time of the invention it would have been obvious to
a person of ordinary skill in the art to use Hewlett-Packard
Co.'s indication in the modified Waldin et al and Menezes et al
system.

Motivation to do so would have been to determine when a
file is being access (see Hewlett-Packard Co column 7 lines 1-
8).

Response to Arguments

10.   Applicant's arguments with respect to claims 1-12 have been
considered but are moot in view of the new ground(s) of
rejection.

11.   Applicant's arguments filed 01/21/2005 have been fully
considered but they are not persuasive. Applicant argues: in
claim 13 Waldin fails to disclose an isolated execution mode if
the file does not have a corresponding digital signature chain;
analyzing an integrity of the files and issuing the digital
signature if the file has an acceptable file integrity, and a
similar argument directed to claim 19.

Regarding Applicant's argument that Waldin fails to
disclose an isolated execution mode if the file does not have a
corresponding digital signature chain; analyzing an integrity of
the files and issuing the digital signature if the file has an
acceptable file integrity, Applicant is directed to the cited
portions of Waldin particularly column 6 lines 43-48 Waldin
discloses entering a scanning process when a part of the chain
fails, and issuing the digital signature if the file has
acceptable integrity (see also figure 4 numbers 46-49). Claim
19 has similarly argued limitations.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the
extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action
is set to expire THREE MONTHS from the mailing date of this
action. In the event a first reply is filed within TWO MONTHS
of the mailing date of this final action and the advisory action
is not mailed until after the end of the THREE-MONTH shortened
statutory period, then the shortened statutory period will
expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated
from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than
SIX MONTHS from the mailing date of this final action.

13.   The prior art made of record and not relied upon is
considered pertinent to applicant's disclosure. Rohatgi (US
6826687) discloses a digital signature chain and Dresevic et al
(US 6253374) discloses checking a digital signature before
executing software.

Any inquiry concerning this communication or earlier
communications from the examiner should be directed to Michael
Pyzocha whose telephone number is (571) 272-3875. The examiner
can normally be reached on 7:00am - 4:30pm first Fridays of the
bi-week off.

If attempts to reach the examiner by telephone are
unsuccessful, the examiner's supervisor, Andrew Caldwell can be
reached on (571) 272-3868. The fax phone number for the
organization where this application or proceeding is assigned is
703-872-9306.

Information regarding the status of an application may be
obtained from the Patent Application Information Retrieval
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access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

MJP

ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER